

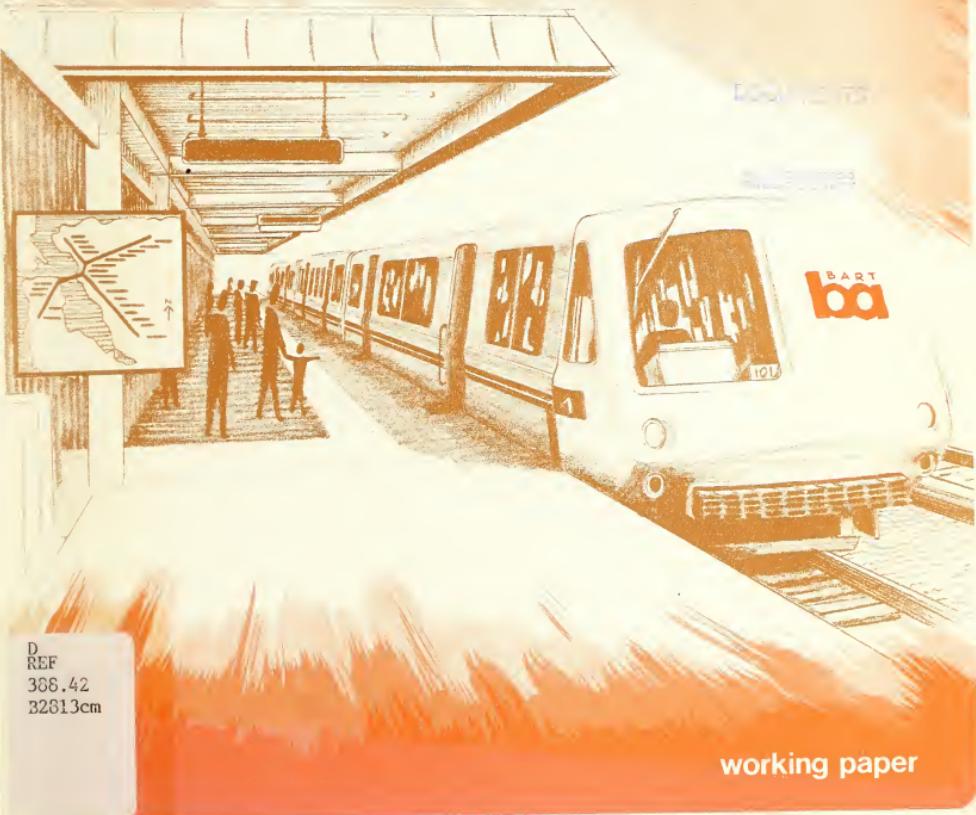
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bart impact program

ENVIRONMENT PROJECT COMMUNITY MONITORING



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The BART Impact Program is a comprehensive, policy-oriented study and evaluation of the impacts of the San Francisco Bay Area's new rapid transit system (BART).

The program is being conducted by the Metropolitan Transportation Commission, a nine-county regional agency established by state law in 1970.

The program is financed by the U.S. Department of Transportation, the U.S. Department of Housing and Urban Development, and the California Department of Transportation. Management of the Federally-funded portion of the program is vested in the U.S. Department of Transportation.

The BART Impact Program covers the entire range of potential rapid transit impacts, including impacts on traffic flow, travel behavior, land use and urban development, the environment, the regional economy, social institutions and life styles, and public policy. The incidence of these impacts on population groups, local areas, and economic sectors will be measured and analyzed. The benefits of BART, and their distribution, will be weighed against the negative impacts and costs of the system in an objective evaluation of the contribution that the rapid transit investment makes toward meeting the needs and objectives of this metropolitan area and all of its people.

BART IMPACT PROGRAM
COMMUNITY MONITORING



MARCH 1976

WORKING PAPER

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PREPARED FOR
U. S. DEPARTMENT OF TRANSPORTATION
AND
U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

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UNDER CONTRACT WITH THE
METROPOLITAN TRANSPORTATION COMMISSION

FOR THE
U. S. DEPARTMENT OF TRANSPORTATION

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PREFACE

The BART Impact Program (BIP) is a comprehensive, policy-oriented study and evaluation of the impacts of the new San Francisco Bay Area Rapid Transit System (BART). The system's alignment and configuration are shown on the page following this preface. The BART Impact Program covers the entire range of potential rapid transit impacts, with major projects covering impacts on traffic flow, travel behavior, land use and urban development, economics and finance, social institutions and life styles, public policy and the environment. The incidence of these impacts on population groups, local areas, and economic sectors is being measured and analyzed. The benefits of BART, and their distribution, are being weighed against the negative impacts and cost of the system in an objective evaluation of the contribution that the rapid transit investment makes toward meeting the needs and objectives of the Bay Area and all of its people.

The Environment Project focuses on the effects of BART's physical presence on its surroundings. Environment is defined broadly to include five components: acoustic, atmospheric, natural, social and visual. Within each of these components the Environment Project will address two related phenomena:

- Direct and indirect physical effects upon the environment brought about by the BART system
- Social and psychological consequences of these physical changes to the environment

The Community Monitoring program, the subject of this report, served as a source for substantive findings on response to impacts, and as an aid in overall research design. It functioned through a variety of non-random, qualitative techniques to gain information on the general nature of community concerns for and responses to BART. Also, it provided a base for verification that all major physical impacts, at least those perceived by persons affected, were being studied. Additionally, it provided indications of the kinds of questions, language and direction the Phase II survey of response to impact should employ for the most meaningful results.

**SAN FRANCISCO BAY AREA
RAPID TRANSIT SYSTEM (BART)**

BART STATION



SUBWAY LINE



SURFACE LINE



AERIAL LINE

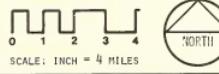


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THE ENVIRONMENT PROJECT

BART IMPACT PROGRAM



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INTRODUCTION

PURPOSE OF COMMUNITY MONITORING

The Environment Project's Community Monitoring program has been directed at serving as a source for substantive findings on response to impacts, and as an aid in overall research design. It has functioned through a variety of non-random, qualitative techniques to gain information on the general nature of community concerns and responses to BART. Also, it has provided a base for verification that all major physical impacts, at least those perceived by persons affected, were being studied. Additionally, it has provided indications of the kinds of questions, language and direction the Phase II surveys of response to impact should employ for most meaningful results.

METHODOLOGY

A three-stage community monitoring effort was undertaken in Phase I.

- Region-wide: Focussed on interviews with persons who had filed complaints (relative to environmental effects) with BART.
- System-wide: Focussed on interviews with planning officials and law enforcement personnel in 14 cities and two counties along the BART system.
- Specific Sites: Focussed on interviews with residents, in six locations, who live within two blocks of the BART line or a station.

SUMMARY OF FINDINGS

Each community monitoring stage resulted in an individual report.

Though all three had the same central focus - preliminary indications of concern and response to impacts - each approached the task from a somewhat different vantage point. Each of the stages are presented in this document as distinct efforts. However, a number of common themes appeared in each of the stages, and are presented here:

- There was a prevailing positive feeling about BART. While specific concerns were raised, an overwhelming proportion of those contacted felt BART was basically good for the Bay Area. There was no feeling that if given the choice now BART would not be approved. However, more specifics on its exact location, design and operation would have to be forthcoming before approval could now be obtained.
- To some extent the relative importance of individual impacts appeared to depend on whether or not people felt something could be done about the impact. For example, trackway and station maintenance seemed to assume relatively great importance since it was felt that the problems could be rather easily resolved.
- Perception of specific impacts increased as distance to BART decreased. The closer respondents lived to a BART trackway or station the more they could differentiate among specific impacts. Beyond a very short distance (approximately one to two blocks) from BART respondents either identified no impacts or lumped them all together into a generalized concern.
- The major impact categories of concern frequently reported were: noise, maintenance, circulation and parking around stations. On the positive side, the design of the stations,

trackway and trains were often mentioned.

- The stations with parking facilities and the aerial track-way sections were the BART facilities identified as being most closely associated with impacts.
- The community monitoring findings correlated closely with those of the pre-BART survey findings*. In both cases noise seemed to be the impact of major concern. Also, the pre-BART findings indicated a strong relationship between closeness to BART and anticipation of impact; the community monitoring findings showed the same relationship.
- There was a great deal of similarity among respondents from all three stages of the Community Monitoring program. One significant difference, however, was the view toward BART-induced development. While most local officials interviewed looked upon this as a positive element of BART, many of the resident respondents viewed actual or potential BART-induced development as a negative factor.

*D. Appleyard, F. Carp et al (1973), Residential Environment Impact Study (Part II, Volumes I-VI), BART II: PRE-BART STUDIES OF ENVIRONMENT, LAND USE, RETAIL SALES, Berkeley: Institute for Urban and Regional Development for the Metropolitan Transportation Commission.

BART COMPLAINT FILE INTERVIEWS

INTRODUCTION

As part of the region-wide community monitoring effort, a copy of BART's complaint file (for the period January-August 1974) was obtained from BART. From this, those complaints and comments relative to environmental concerns were geographically plotted and many of the persons making the complaints were then interviewed. The complaints were focussed in nine locations (Figure 1) and forty-three persons were interviewed at these locations. In cases in which the original complainant could not be interviewed, other nearby residents were questioned.

BART's complaint file was used as just one source from which the Environment Project gained information on the nature of community reaction and response to BART. Other sources included continual review of the public media (local and regional), interviews with residents along the BART line and with local public officials, and informal behavioral observation in neighborhoods affected by BART. The objective of this effort was to obtain indications of which impacts are felt most and least strongly, as well as positively and negatively, by those affected.

SUMMARY

Problems most frequently cited were:

- Overflow parking
- Noise (usually associated with track maintenance)
- Interference with TV reception
- Lack of maintenance of BART right-of-way and in station parking lots
- Dust from BART's dirt-top service roads
- Shadows from aerial structures in residences' backyards

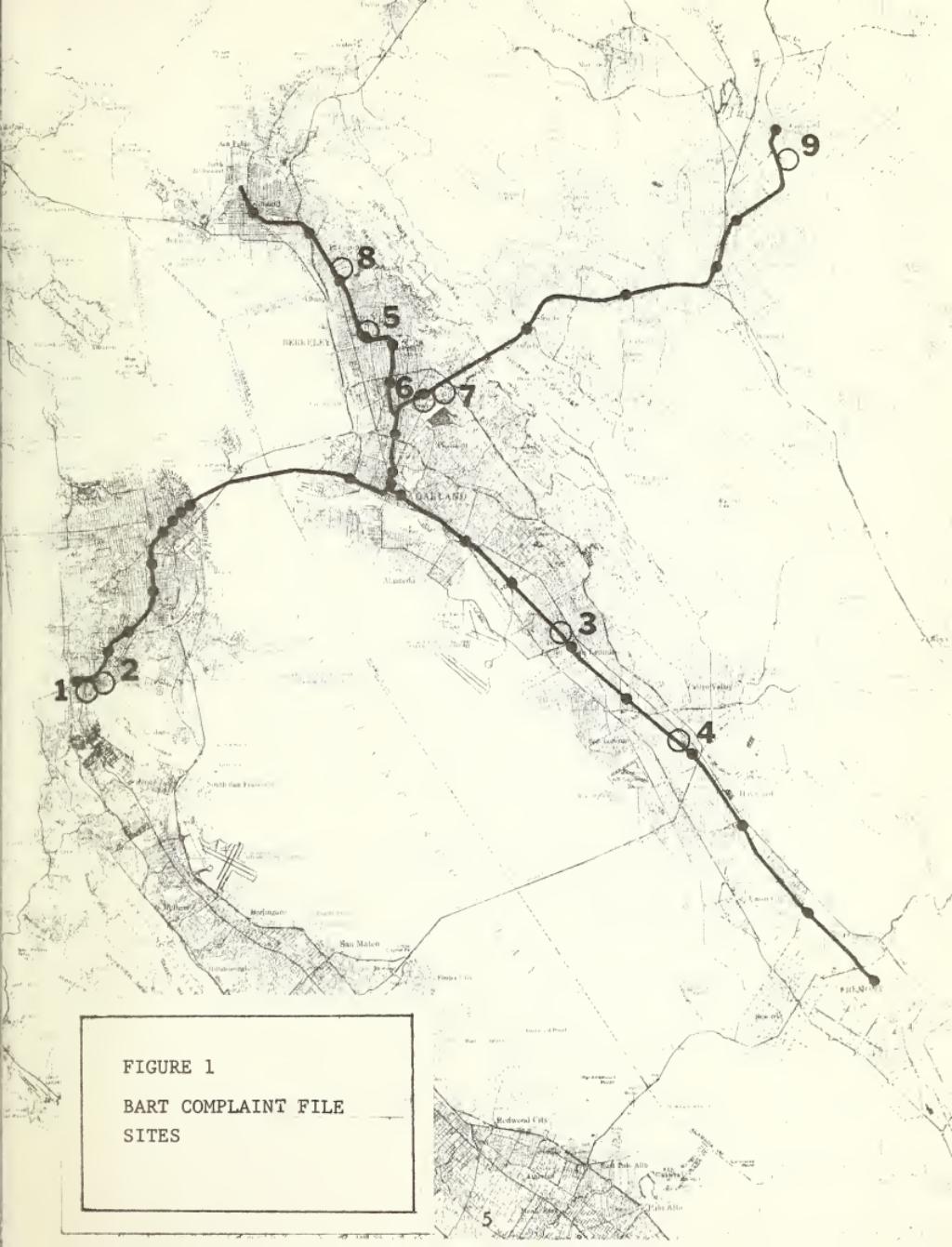


FIGURE 1
BART COMPLAINT FILE
SITES

Intensity of feeling about the various impacts mentioned varied depending on whether or not the respondent felt BART could, with a reasonable effort, do anything about the impact. For example, many felt that noise impact was inherent to the transit system and they, the respondent, would have to adjust to the noise. However, lack of maintenance in the station area was something that BART could remedy with reasonable ease. Hence the maintenance issue took on a level of significance beyond its actual impact.

The following are the findings of the interviews, site-by-site.

FINDINGS AND ANALYSIS: INDIVIDUAL SITES

Site 1

The first site surveyed was that area immediately adjacent to the BART station and parking area in Daly City. Five interviews were conducted in this area along the 000 block of Woodrow Street and along the 000 block of Willits Street. These homes are very close to Knowles Avenue, the street which adjoins the BART parking lot.

Persons interviewed in the area unanimously agreed that the greatest problem BART presented for them was overflow parking during the day from the BART parking lot. Typical comments from residents included complaints that they could not park their own cars on the street, and often access in or out of their garages was impossible. This latter problem, they pointed out, is complicated by the fact that driveways and streets in the area are very narrow, forcing the driver to cut a very sharp angle for access into and out of the garage. Cars parked right up to the driveways and often across the street from the driveway frequently make cutting the angle impossible.

When asked if the problems they identified have caused them to adjust their lives in any way, most responded that they were annoyed by the fact that they could not park easily in front of their own homes or use their own garages.

When asked what they might do about the problem, some said that they would try to get limited parking ordinances passed for the area, but most said that they thought they would have to live with the problem or move away from it.

Site 2

Site two is the 100 block of De Long Street in San Francisco. In this area the BART right-of-way is at-grade which runs along the backside of the even-numbered houses in this block. The complaint that BART had received from persons living in this area was that the trains were noisy. Of the persons interviewed along De Long Street only one complained vehemently of noise. The others generally suggested that BART was not a very serious problem.

When asked if BART had caused them to make any adjustments in their lives, the person who complained of noise said that she had to sleep in the front room to avoid the noise. Another interviewee said that they kept their curtains drawn on the backside of the house to insure privacy. Most said they have learned to live with the problems they identified.

Site 3

The third site surveyed is situated between the north side of BART on aerial right-of-way and Apricot Street and between 107th and Royal Ann Street in Oakland. Again the complaint to BART was noise.

Most interviewees in this area suggested that the Southern Pacific Railroad, which has a right-of-way near BART, is a greater annoyance than BART, but that BART seems to be becoming increasingly noisy.

The most immediate complaint was that BART's passing on the aerial structure caused interference in the interviewees' TV reception.

Site 4

Site four abuts the aerial BART right-of-way on the 500 and 600 block of Paradise Blvd. in Hayward. The complaints BART received regarded train noise. However, the interviews revealed that compared to other BART problems which respondents expressed, noise was a minor annoyance. The interviewees' basic complaints in this area concerned what they considered to be BART's lack of maintenance of its right-of-way. Accordingly, they complained that BART's drainage ditch and cyclone fence, which separates BART's property from theirs, is a "dirty mess." Further, they complained that the dust from BART's dirt-top maintenance road makes it difficult for persons with property abutting BART's to keep their back yards and homes clean. Additionally, those interviewed complained that BART did not restore to its former condition 15 feet of property that it rented from landholders in this area for use during BART's construction. Other problems cited in this area were TV interference and the fact that the aerial trackway shadows the backyards from the afternoon sun, making it difficult to grow certain plants.

When asked if they had found it necessary to make any adjustments because of any of these problems, several of the interviewees said that they had subscribed to Cable TV to eliminate BART TV interference. Others noted that they had covered the cyclone fence with bamboo to hide the mess behind it.

Site 5

This site is the area where BART surfaces from subway in North Berkeley near the intersection of Hopkins and Peralta Streets. The BART complaint file identified the problem here as train noise. The problem the respondents spoke of in this area was that maintenance crews and vehicles disturbed the persons living in homes immediately adjacent to the gate by the tracks through which BART machinery enters and exits. This problem, persons stated, was annoying because it usually occurred late at night, although fairly infrequently. No one suggested that the problem was of a magnitude great enough to cause them to make any adjustments to their living style.

Site 6

Two sections were surveyed adjacent to the Rockridge station in Oakland. The first was the 5900 block of Keith Avenue and the second was the 5600 block of Miles Avenue. Persons in the area complained to BART about maintenance noise. Persons strongly stated that maintenance machinery was disturbing sleep late at night.

Persons on Miles suggested that BART could do a better job of maintaining its parking area in order that it might be more aesthetically pleasing to persons living in the area. To underscore their point, they pointed out broken BART signs, dead shrubs and broken glass in the west end of the lot. Another point they made was that they thought BART could keep all of the parking area's lights on at night in the interest of enhancing safety in the neighborhood.

Site 7

This site is a cul-de-sac, Chabot Court in Oakland, which exists below the elevated right-of-way near the tunnel into the Berkeley hills. For this site BART had received complaints of excessive train noise. Those closest to the tracks complained that noise at night from maintenance machinery was very disturbing. Insofar as noise from the trains was concerned, all said that train noise was not as bad as the highway (Route 24) noise and that they had learned to live with the noises. Only one person, the one who lived closest to the line, reported any adjustments to overcome the problem. This person said that a new bedroom that they were planning to build onto the house would have double glazed windows on the side facing BART and the highway.

Site 8

Interviews at this site were conducted on the 400 block of Richmond Street and immediately across the street (Elm Street) from BART's El Cerrito Plaza station. The major complaint registered here was that on occasion a bell "bangs" at about one or two second intervals during the night when "something goes wrong" at the station. This they found extremely annoying. One person noted that BART had supplied them with a phone number to call when the problem occurred. The person said that this was a satisfactory solution to the problem. The only other complaint was that a respondent wished that BART would do a better job at maintaining the station area. No one said that BART's existence across the street had caused them to make any compensatory adjustments in their lives.

Site 9

This site is a trailer court across San Miguel Street in Concord. The site is immediately across from BART's Concord yards. The complaint BART received was that of excessive noise and fumes. The persons interviewed in this area, those living in trailers closest to San Miguel, had no complaints regarding either fumes or noise, and none suggested that they had made any special adjustments in their lives to accommodate any problems that BART was causing them. Only one person, and this response came after extensive probing, said that she heard noises which sounded like that of coupling railroad cars at night. This she said did not bother her. Generally, no persons complained of BART's yards being directly across from them.

PLANNING AND LAW ENFORCEMENT OFFICIALS INTERVIEWS

INTRODUCTION

In late December 1974 and early January 1975 informal interviews were conducted with planning officials and law enforcement personnel in 14 cities and two counties along the BART system. The objective of the interviews with planners was to ascertain impacts, if any, that BART has had on the environment in their communities. The interviews with law enforcement personnel were to determine BART's impacts on safety and security in their jurisdictions. (Each of the jurisdictions except for San Francisco is responsible for security outside of the station and parking lot areas; in San Francisco station security responsibility will be divided with the San Francisco Municipal Railway, which shares the stations with BART). All of the interviews followed a similar format in which the respondent was asked a series of open-ended questions.* Copies of all raw interview data are on file with Curtis Associates.

SUMMARY

Findings revealed that BART's major impacts as regarded by planners were: induced land development, lack of parking, lack of connections with the transportation modes, land use and zoning changes, facility aesthetics, traffic circulation (around station areas) and noise and vibration. Most planners regarded BART as a neutral or positive influence on their community. Where impacts do occur they are generally located near station areas. No particular population group was identified as being affected more than any other group.

For police agencies, responses given generally indicated a feeling of positive impact related to BART. However, parking facilities and station area circulation problems were areas of negative response.

*List of questions appears at the end of this section, pp. 25-26.

There was no reported pattern of unusual security problems outside the station areas that was unique to BART.

LOCAL PLANNER INTERVIEWS

Results from the interviews with planners are found in the following section. Generally speaking, planners identified six areas in which they felt BART was having an impact on their communities.

- Development
- Parking
- Urban Design
- Noise
- Circulation
- Construction

Development

Generally, the planners viewed BART as a positive instrument for future growth and development in their communities. This sentiment was particularly strong in suburban areas such as San Leandro, Hayward, Union City, Fremont, Walnut Creek, Concord, Daly City, and Richmond. In these areas provision (rezoning or altered landholding capacities) has been made or is being made to create development opportunities near stations. In some communities such as Fremont, Richmond, and Walnut Creek, newly completed structures, or some which will be built in the near future, were cited as BART-influenced development. In the downtown sections of San Francisco, Oakland and Berkeley, planners noted that BART helped encourage the facelifting of older commercial areas. Although the planners attribute a significant amount of development to BART, none suggested a linear relationship between the development and BART's influence. Additionally, though substantial BART-related development was cited, many of the planners did not feel the full potential of BART had yet been realized.

Parking

The planners underscored parking problems, stemming from inadequate parking facilities near BART stations, as a major source of community irritations with BART. The consequences of this were noted as being traffic congestion and circulation problems, annoyed commercial and residential interests, and some perceived deterioration of air quality near stations. These impacts were noted in Daly City, Hayward, Fremont, Union City, Lafayette, Walnut Creek, and Concord. The only comment regarding parking impact associated with an urban station came from the planner in San Francisco who expressed concern over on-street parking by BART riders near the Glen Park station (which provides no BART parking facilities).

Urban Design

Generally planners see BART's design as a positive visual factor in their communities. Those along the Concord line mentioned its aesthetics most enthusiastically; those on the Fremont line saw its visual presence as a positive sign of growth and development. In El Cerrito, the planners noted that the linear park was a positive addition to the community. The only negative comments came from Oakland and Berkeley where planners suggested that some of the stations (No. Berkeley, Ashby and MacArthur) are out of scale with the surrounding environment.

Noise

Though planners mentioned this impact it was not with any feeling of great intensity. Specific areas where this impact was noted were Concord, Pleasant Hill, Walnut Creek, Berkeley, El Cerrito, and Hayward. In most of these areas BART is elevated. The most specific comment came from Berkeley planners who noted noise at the north end of the tunnel, a low-density residential area, when the BART trains enter or exit.

Circulation

BART has created problems of pedestrian and traffic circulation in three ways. First, inadequate parking at BART stations creates traffic congestion and parking overflow. This problem is particularly evident in suburban areas such as Daly City, Walnut Creek and Concord. Second, some stations (Fruitvale, MacArthur, Pleasant Hill, Walnut Creek, Hayward and San Leandro) are located such that pedestrian and auto access to them is difficult. Walnut Creek, for instance, requires pedestrians and autos using the station to cross main highway arterials. In Hayward, San Leandro and Walnut Creek, planners note that the stations servicing the downtown areas of their communities are removed from the center of town.

A third circulation effect relates to BART's right-of-way having created physical barriers. In the two places where this was cited, Richmond and Fremont, it was viewed as a positive effect. In Richmond, BART created a long-needed pedestrian walkway over the Southern Pacific Railroad (and BART) right-of-ways. In Fremont, BART reinforced the Southern Pacific barrier between the center of Fremont and old Niles, a condition the planner stated that most persons in Niles regarded as beneficial.

Construction

Planners in Oakland, San Francisco, and Daly City noted that during the pre-construction and construction periods, BART required the dislocation of persons and created significant physical blight. However, it was felt that construction impacts are no longer a problem.

Additional Comments

Most of the impacts mentioned by the planners, whether positive or negative, were located around BART stations. Exceptions to this were those impacts related to noise, which in addition to station areas, were also to be found along portions of BART's aerial track. These non-station areas are in residential areas in Walnut Creek, Pleasant Hill, Hayward and El Cerrito, and at the north end of the Berkeley subway (where the trains enter and exit from the subway).

In response to the questions as to whether any particular population group is affected by BART impacts, no group (ethnic, age, income, etc.) was singled out. However, a number of planners mentioned low income groups as being particularly affected by construction, or more specifically, dislocation due to acquisition of right-of-way. Daly City, West Oakland and San Francisco were community locations where this problem seemed to be most noted.

Planners generally saw development impacts in terms of long-term significance. Where development is not now occurring, most thought that it would eventually occur. Noise, parking and circulation were impacts viewed as having short-term effects. They saw these as problems susceptible to short-term solution, but, nonetheless, problems which would take a long time to solve.

Respondents were asked what actions have been taken and what should be done to ameliorate negative and accentuate positive impacts at the local and regional level. Following is a representative sampling of responses:

- Linear parks could be tied into local facilities.
- More could be done at the local level to encourage development near stations.

- Provide better connectors, e.g., bus feeder service.
- Better local participation with BART to solve parking problems.
- Make capital investments to improve streets near stations.
- BART and localities work more closely with Caltrans to solve circulation problems.
- Employers in core cities cooperate to stagger employee hours.
- Solve BART parking problems.
- Reduce noise levels.
- Provide better connections with other mass transit modes.
- Make trains run.
- Better coordination between regional efforts (AC-BART) and localities.

Following up on the last question respondents were also asked, in retrospect, what actions should have been taken in their community during the early planning and implementation stages of BART to avert undesirable environmental impact. Following is a representative sampling of the responses:

- More attention to station design.
- Could have gotten more local input regarding station sites.
- Worked more closely with Caltrans to coordinate BART with highways in the area.
- Created a feeder system.
- Nothing different could have been done successfully.
- Internal circulation at stations could be better.

Each respondent was asked, on balance, how they would rate BART's impact on the environment in their area. No one rated BART's impact as either very negative or very positive. Only one rated it negative. Most responses were neutral or positive.

LOCAL LAW ENFORCEMENT OFFICIALS INTERVIEWS

All law enforcement officers in suburban communities, except the interviewee in San Leandro, cited congestion created by overflow parking as the single greatest impact BART is making at this time on their communities. Only a small number of respondents reported any increase in criminal activity or security problems near BART stations. Fremont and Daly City police reported some increase in crimes against autos and persons in the vicinity of the station as a result of the increased activity and overflow parking. Few police reported any BART-related problems regarding personal safety. However, most noted that incidence of these problems could increase if traffic and pedestrian congestion continues to increase near stations.

The following summarizes the responses of the law enforcement officials to each of the questions asked in the interviews.

1. What effects has BART had on problems of safety and security in your community?

Police in most suburban areas complained that since the opening of the Transbay Tube (September 1974) commuters are overtaxing inadequate parking facilities which creates auto and pedestrian congestion at BART stations. Exceptions to this impact are the urban stations without parking facilities and San Leandro. The downtown San Leandro station also evidently catches overflow parking from neighboring industrial plants.

A small number of interviewees reported security problems around BART stations. Officers in Daly City, Hayward, Fremont and San Leandro noted slight increases in such crimes of security as malicious

mischief, assault, auto theft, burglary, and purse-snatching.

The effect of BART in increasing the mobility of the criminal element was stated by the Fremont Police as a potential problem, but was discounted by the Contra Costa County Sheriff's Office who stated that their investigation of that fact did not show any undue problem. It was their view that undoubtedly the criminal element will use BART just as they will any other transportation system. In fact, the Richmond Police reported that the fencing of the BART line in the vicinity of the local Montgomery Ward store has reduced purse-snatching in the area. The fence removed a handy escape route.

Few police reported any BART-related problems regarding personal safety. However, most noted that problems of safety could increase if traffic and pedestrian congestion continues to increase near stations.

2. Did BART create these effects, or did BART accentuate them?

Where problems occurred because of increased congestion -- pedestrian and auto -- BART was viewed as creating the problem. However, many viewed the problem as one caused by an increased number of people and autos, not BART. In their view, the same problems would have occurred if the attraction was not BART but some other facility that attracted the autos and people.

BART's station location was blamed by some for unnecessarily increasing circulation problems in the area. In those cases, the station was located in a manner that made it difficult to solve the circulation problems in the area. Fruitvale, MacArthur, and Walnut Creek stations fall into that category.

The linear park in El Cerrito, because the original design did not provide for access by police vehicles, created a problem. This was solved through the institution of a special patrol on a three-wheel vehicle to patrol the linear and other parks in the jurisdiction.

Oakland police felt that BART has reduced some of their problems by reducing the number of autos in downtown Oakland.

Generally, officers expressed belief that as the density around BART stations increases, the incidence of problems of congestion, safety and security will also increase. This will mean that they will have to change their means of providing law enforcement to areas near BART stations.

3. Where do these problems occur?

The overflow parking and traffic congestion occurs in proximity to BART's parking lots. In cases where thefts occur, they are also in proximity to BART stations.

4. Does any particular population group create the problem and/or is any particular population group the victim?

No particular population group was identified as either creating or being the victim of BART-related safety and security problems. Those who live in the area and those who use the system are the victims of problems.

5. What effects do you think will be of short-term significance and which will be of long-term significance?

Generally all of the respondents feel that the parking and congestion problems are here to stay. Additionally, most expect higher density to occur around BART stations and that this, because of the increased number of people, will cause more problems. However, that result is viewed as a natural result of there being more people in the area, whether BART-induced or not. San Francisco feels that there will be an increase of problems once Muni begins subway operation.*

The Oakland Police Department spokesman didn't see any long-term problem resulting from BART. To the contrary, it was felt that BART would alleviate problems in the area by attracting more and more people out of cars, a positive benefit in terms of auto-created problems.

6. What steps might be taken to ameliorate these impacts at the local and regional levels?

A few suggested that, at the local level, more parking restrictions would help; others suggested larger parking lots and more feeder buses. San Francisco feels a larger force dedicated to security on the premises will be needed when Muni begins to operate in the subway. In some areas circulation needs to be changed to improve the situation. El Cerrito felt that the linear park design should have been such that police vehicles could patrol it.

Other than the parking situation, the law enforcement personnel were basically satisfied with the planning and implementation of the BART system. Some were very complimentary of the BART security force in terms of both the idea and the implementation.

* The San Francisco Municipal Railway (MUNI) will soon shift its Market Street streetcar lines into a subway just above BART.

7. On balance, how would you rate BART's impact on your community?

The overwhelming response of the law enforcement officials interviewed was that BART was a positive influence; a few leaned toward neutral.

TABLE 1

QUESTIONS FOR LOCAL PLANNING PERSONNEL

1. What changes has BART had on the physical and social environment of your community?
2. What has been the effect of each change?
3. In which geographical areas of your community do these effects occur?
4. Is any particular population group affected by these impacts more than any other?
5. Which of these impacts, in your opinion, are short-term? Long-term? Why?
6. What actions have been taken and what should be done to ameliorate negative and accentuate positive impacts at the local and regional levels?
7. What actions at the local level should be taken by a community during the early planning and implementation stages of a rail transit system to avert undesirable environmental impacts?
8. On balance, how would you rate BART's impact on a scale of one to five?
 - a. Very Negative
 - b. Negative
 - c. Neutral
 - d. Positive
 - e. Very Positive
9. Which of the impacts will create the greatest future problems for this area and which will be of the most benefit in the long term?
10. Can you help us to identify any additional agencies, groups, or persons who might help us to gain more information regarding the BART effects you have identified today?

TABLE 2

QUESTIONS FOR LOCAL LAW ENFORCEMENT OFFICIALS

1. What effects has BART had on problems of security and safety in your community?
2. Did BART create these effects or did BART's creation accentuate the problems?
3. Where do these problems occur in your area?
4. Does any particular population group create the problem?
5. Is any particular population group the victim of the problem?
6. Which of these problems are short-term? Long-term? Why?
7. What steps might be taken to ameliorate these impacts at local level? At the regional level?
8. On balance, how would you rate BART's impact on a scale of one to five?
 - a. Very Negative
 - b. Negative
 - c. Neutral
 - d. Positive
 - e. Very Positive
9. Can you help us to identify any additional agencies, groups, or persons who might help us to gain more information regarding the impacts you have identified today?

FOCUSSED INTERVIEWS WITH RESIDENTS NEAR BART

INTRODUCTION

The objective of the group interviews was to gain insights into the concerns and reactions to environmental impacts among persons living or operating businesses very close to BART. This part of the Community Monitoring program also provided information relative to the conduct and design of the Phase II detailed response survey.

INTERVIEW LOCATIONS

Interviews were carried out in six locations, which varied by different BART characteristics (subway vs. aerial), and by different adjacent population characteristics (ethnicity, income). Areas where interviews were conducted included (Figure 2):

1. Daly City
 - End-of-line elevated station; adjacent to freeway and major arterial; highly urbanized single-family, with limited commercial area; lower middle income; predominantly Caucasian population.
2. Mission & 24th Street - Subway station, below major arterial; highly urbanized mixed commercial and industrial uses; low income area; large percentage of Latino population.
3. El Cerrito/Albany
 - Aerial line; highly urbanized single-family residential, middle income; predominantly Caucasian population.

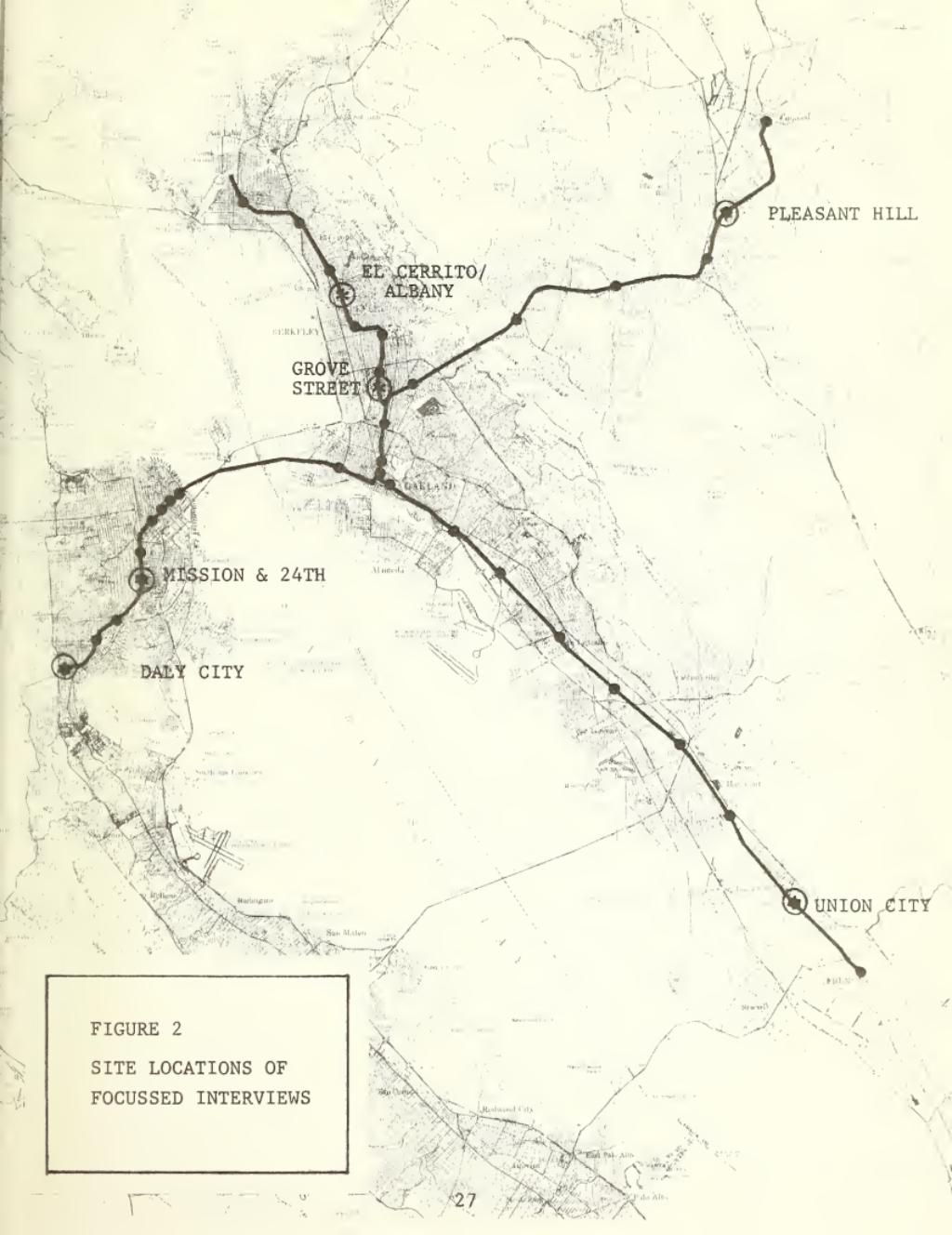


FIGURE 2
SITE LOCATIONS OF
FOCUSSED INTERVIEWS

4. Grove Street - Aerial line in median of major arterial; highly urbanized single and multiple family residential; low income; predominantly Black population.

5. Pleasant Hill - Suburban elevated station area; formerly all single family and open space; now mixed multiple and single family; middle to upper income; predominantly Caucasian population.

6. Union City - Suburban elevated station area; single family residential with some neighborhood commercial; middle income; mixed Spanish surname and Caucasian population.

STUDY METHODOLOGY

Information was obtained from respondents whose residence or business location was two blocks or less from the BART line or a station. The basic means of making contacts with potential participants were:

- contacting agencies or community organizations to obtain names of probable participants in a focussed group meeting;
- contacting the suggested participants and following their suggestions for other participants;
- approaching residences along the line to get participants.

Judgment of local agencies and spokesmen, rather than statistical measures of reliability or representativeness, was the determining

factor in selecting interviewees. Only a limited number of contacts were made in each area, ten to twelve at the most. From this group, the number at any one interview averaged from three to five. No statistical significance is intended to be attributed to the responses.

In each group interview a similar discussion format was followed, one which ran from the general to the specific. It began with questions relative to general feelings about BART (e.g., was BART a good idea?), then proceeded to items about overall environmental impacts, and concluded with questions covering specific impact categories (sound, safety, visual quality, etc.) examined during Phase I of the Environment Project. The discussion format is found in TABLE 3, which appears at the end of this section.

SUMMARY OF FINDINGS

Responses most frequently cited were:

There was almost universal support of the BART concept among the people who participated in the group interviews, even among the critics of specifics of the system.

There were feelings of discrepancy between what BART originally "promised" in terms of effects and what those interviewed now perceive to be the effects.

Noise and vibration from elevated structures were a primary complaint of those respondents who lived near the BART elevated lines.

Pleasant Hill and Daly City residents near the station (with large parking areas) were most concerned about the overflow parking and increased traffic around the station.

Development pressures were of concern to interviewed residents in the Mission and Pleasant Hill areas.

Union City respondents felt that BART was a definite asset for growth -- residential and business -- and the environmental impacts were minimal, if not non-existent.

Mission Street and Daly City interviewees felt that BART was a negative factor for business development, by drawing potential customers away from their area because of easier access to downtown San Francisco shopping.

FINDINGS BY SITE

The following summary of responses given during the survey are separated into 1) those that bear directly on current environmental impacts of BART, 2) comments on expectations expressed about the BART system and its impact upon the environment, and 3) general comments on BART and present and expected developments that the respondents thought will be an outcome of the BART system.

Daly City

Environmental Impact of BART Facilities and Operation;

- no special adverse comments on visual aspects of station design except that structure should be painted;
- overflow parking is a definite problem for homeowners in the area;
- circulation, because of traffic and street design, is a problem;
- increased traffic creates safety problem.

Future Environmental Impacts:

- parking structure will reduce overflow parking problem;
- structure for new parking may not be visually pleasing.

General Comments on Developments:

- traffic around the station has changed the neighborhood from a quiet desirable family area;
- future developments may force some to leave the area;
- BART has siphoned off some Daly City business to San Francisco; was especially noticeable during the extended hours of operation during the Christmas shopping season.

Mission & 24th Street

Environmental Impact of BART Facilities and Operation:

- station areas with open space plazas add to area; plaza area used for rallies and pamphleteers;
- question the use of brick on street; they are becoming chipped and broken;
- more vacant store fronts on Mission because of lengthy BART construction.

Future Environmental Impacts:

- none expected in the Mission.

General Comments on Developments:

- Mission residents did not benefit via jobs during construction and operation;
- BART has not increased business along Mission Street;
- west side of Mission Street is seeing increased housing cost pressure;
- feel that there will be increased development pressure around station area;

- station should have murals, etc. to reflect Mission; presently station does not reflect the character of the Mission district;
- Muni lines parallel to Mission being reduced; more inconvenience and cost to Mission residents since BART service is not a replacement for the bus route;
- BART should have multi-lingual signs to facilitate use by non-English speaking riders.

E1 Cerrito/Albany

Environmental Impact of BART Facilities and Operation:

- linear park is a good idea, but needs better lighting for security;
- appearances of trains and structures are pleasing, except that most favor an underground station such as in Berkeley;
- trains look dirty as if they have not been washed;
- noise and vibrations are problems; increased noise started approximately two months after operation started;
- noise increases with speed of train;
- vibrations have caused problems with doors and windows;
- causes moviehouse to shake;
- noise seems to be increasing;
- at railroad crossing the BART train sounds like a regular train and might cause motorists to react as if meeting a train at an intersection;
- saw a boy trying to recover a kite that fell on the third rail;
- heard test cars running at 4 a.m.;

- BART trains can be clearly heard on the hillsides 6 to 8 blocks from the line.

Future Environmental Impacts:

- increased noise and vibration problems with more frequent and late night operation.

General Comments on Development:

- makes homes very near the line hard to sell;
- plan to move because of BART;
- was aware of the plans to have an elevated line near home but was assured that the trains would be quiet;
- system should have been underground like in Berkeley;
- overall, BART is good for the Bay Area.

Grove Street

Environmental Impact of BART Facilities and Operation:

- elevated structure design looks all right but it would be better underground;
- thinks a combination of dirty streets and speeding trains cause more debris to fly around;
- trains look very pleasing; some need to be washed;
- can hear trains easily when they enter the tunnel for Berkeley;
- near freeway, can hear BART in the early a.m. but freeway noise soon drowns it out.

Future Environmental Impacts:

- expects overflow parking problems to occur at MacArthur station when the system operates as planned.

General Comments on Development:

- at the time of the vote, thought the lines would be in subway.
- didn't consider whether it would be underground or a subway; only considered where the lines would go;
- Grove-Shafter freeway created disruptions, closed streets and increased noise level; in that context, BART is hardly noticeable.

Pleasant Hill

Environmental Impact of BART Facilities and Operation:

- station, structure and landscaping are pleasing;
- overflow parking, increased traffic, more traffic noise and circulation problems;
- causes wildlife (birds) to move to other areas;
- increased auto traffic generates more smog in area;
- increased traffic creates safety problem;
- early morning trains generate a noise problem.

Future Environmental Impacts:

- more auto pollution problem in area;
- more frequent service will increase noise problem and more congestion.

General Comments on Development:

- feeder bus system is needed to alleviate parking problem;
- future parking should be underground;
- speculators have bought up homes and are now renting them at high rents which brings communal living to a formerly "family" community;

- BART was a good idea; convenient to the city and inexpensive;
- rezoning removed friends and neighborhood people from the area;
- the new plans will remove some of the open space.

Union City

Environmental Impact of BART Facilities and Operation:

- very pleased with the design of the BART structures and trains;
- (Realtor) the only place where BART creates a noise problem is for a few blocks in the Decoto section where homes are old and he feels the city should buy the property when it is put up for sale;
- BART reduces auto pollution because it takes riders out of cars.

Future Environmental Impacts:

- full service operation will take more cars off the highway and reduce pollution.

General Comments on Developments:

- BART has been a boon to Union City in terms of developments; Kelly-Moore Center is a direct result of BART; some of residential growth is a direct result of BART;
- BART gives Union City an identity;
- because of BART, local transit service has been instituted in the area;
- have noticed BART users shopping at Kelly-Moore Center and Safeway;
- noticed apartment dwellers walking to BART station;
- too much adverse publicity given BART by media.

TABLE 3
FOCUSSED INTERVIEW QUESTIONS

I. GENERAL QUESTIONS:

1. How do you feel about BART?
2. Was it a good idea? Why, or why not?
3. What effect does it have? Why?
4. What do you like about BART? Why?
5. What is it about BART you don't like? Why?

II. FOCUSSED QUESTIONS TO COVER ENVIRONMENT POINTS NOT COVERED EARLIER

1. Appearance: How does it look? (Probe fully re color, size, location, movement, train design, station, parking lot, park, etc.)
2. Visual Intrusion: Do you feel that it visually intrudes on your area?
3. Noise: Are there any problems with noise caused by BART or buses to BART? How does it affect you and what are you doing differently because of it?
4. Barriers: Is it easier or harder to get around in this area since BART has been built? Do you feel cut off from friends or activities because of the BART installations?
5. Vibrations: Are there any problems with vibrations when the BART trains go by?
6. Safety: Has BART created any safety problems because of the traffic - both buses and autos?
7. Security: Do you feel that, because of BART, the security problems in the area are getting worse?
8. Natural Environment: Is BART having any effect on the natural environment in this area: That is, has it affected trees, birds, created some soil erosion problems, etc.?
9. Air Quality: Do you think BART has helped improve the air quality in the region and the neighborhood?
10. Microclimate: Has BART created any problems or benefits by changing the normal wind patterns, temperature, or shadows in this area?
11. Illumination: Are there any problems with parking lot lights or train lights? How about the linear park lights or lack thereof?

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* Document is available to the public through the National Technical Information Service (NTIS), Springfield, Virginia 22151. Other documents are MTC internal working papers.

